



EFFECT OF STUDY HABITS ON ACHIEVEMENT OF ELEMENTARY SCHOOL STUDENTS IN MATHEMATICS

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ABSTRACT

Academic achievement is the major factor for which every educational institution put their time, energy and resources to the best possible extend. There are number of factors affecting academic achievement which have been studied by many researchers in the past. One such factor which is catching the attention of teachers and researchers is the Study Habits. The present study aimed at finding out the relationship of study habits of students and their achievement in mathematics. It also tries to examine the effect of Study Habits of boys and girls on Achievement in Mathematics of Elementary school students. Another important purpose of the study is also to examine as to whether there exists any relationship between study habits of Elementary school students and their academic achievement in Mathematics.

KEY WORDS: Achievement, Elementary, Mathematics, Effect, Study Habit, Variable.

1. INTRODUCTION:

Mathematics is considered as the science of patterns and relationships. As a theoretical discipline, it explores the possible relationships among abstractions without apprehension in the real world. The central theme of investigation in theoretical mathematics is identification which includes diagnosis of a small set of basic rules and ideas. Mathematics is a creation of human mind concerned primarily with ideas, processes and reasoning. It is much more than Arithmetic, Algebra, Geometry, Trigonometry, statistics and calculus. It is a way of thinking, a way of organizing logical proofs. It gives an insight into the power of human mind. So this forms a very valuable discipline of teaching learning programmes of school subjects everywhere in the world. So the pedagogy of mathematics should be very carefully built in different levels of School Education. Achievement in Mathematics depends on rigorous practice and careful understanding of mathematical formulae. There are also certain other factors for better academic achievement in Mathematics. One of the major factor is Study Habits that is said to affect quite a great deal Academic achievement. Before understanding what is Study Habits let us now have a glimpse on Academic achievement.

Rao (1964) said that Academic Achievement includes life goals, aspirations, study habit, emotional factors, personnel and social adjustment etc. Harrock, 1969 defined academic achievement as "The state or level of person's skill, the range and depth of his knowledge and his proficiency in a designed area of learning and behavior. Academic achievement in the present socio-economic and cultural context is of paramount importance. Dictionary of Behavioral science (Wolf man, 1973) defined academic achievement as the level of proficiency attained in some specific area concerning scholastic domain such as reading, mathematics, science and social studies or some other subjects. Azikiwe, 1998 describes the study habit as the adopted way as manner, a student plans his private reading after classroom learning so as to attain mastery of the subject. Good, 1998 defined study habit as "the student's way of study whether systematic, efficient or inefficient etc.

Study Habit as a research variable has been studied by many of the researchers like Kochhar, 2000, Jain, 1965, Januar, 1961, Bhaduari, 1971, Sinha, 1972. Most of the pupils of today lack depth of thought and breadth of vision due to bad Study Habits. M. Mukhopadhyaya and D.N. Sansanwal identifies the following nine different kinds of the study habit behaviors. These are comprehension, concentration, Task-orientation, Study sets, interaction, Drilling support, Drilling and Language. Dinesh, 2003 in his study with a sample size of 300 students of class XI selected randomly from government and private senior secondary schools of Chandigarh concluded that there is significant difference in the study habit of students belonging to science and arts stream. However, he found that there is no significant difference between study habits of students of science and commerce group as held at arts and commerce group. Sujata (2006) conducted a study on Academic Performance in relation to anxiety and study habits of high school students (N=200) from government senior secondary schools. The results from the study revealed that boys were poor in study habits than girls and hence they show less achievement than girls. Hudson (2010) conducted a study on performance of college students' impact of study time and study habit in which they found that some study habit had a positive direct relationship on students' performance but others had negative direct relationship. Ergene (2011) in his study investigated relationship among study habit test anxiety environment motivation and academic success in a Turkish High School for 10th students by using study habits inventory and showed that study habits and anxiety were positively associated

with academic achievement. Lancaster and Robinson (2011) in a study to determine the characteristics that influence students' course Performance and showed that how students' study habits change during the semester in order to facilitate better course performance in science course at Oklahoma state university students with good study habits and poor study habit.

2. STATEMENT OF THE PROBLEM:

After going through the studies and from the own experience, some questions such as (a) whether the study habits have any effect on achievement in Mathematics of Elementary school students (b) whether the study habits of boys and girls of Elementary school students have any effect on achievement in Mathematics, (c) Is there any relationship between study habits and achievement in Mathematics of Elementary school students? These are some of the questions that arose in the mind of the researchers. Therefore, the researchers have decided to conduct the study on "Achievement of Elementary School Students in Mathematics: Effects of Study Habits" to find out the answers of their queries.

3. OBJECTIVES OF THE STUDY:

The Present study was undertaken with the following objectives:

- To examine the effects of Study Habits on Achievement in Mathematics of Elementary school students.
- To examine the effects of Study Habits of Boys and Girls on Achievement in Mathematics of Elementary school students.
- To study the relationship between study habits and achievement in Mathematics of Elementary school students.

4. HYPOTHESES OF THE STUDY:

- Study habits have no significant effect on achievement in Mathematics of Elementary school students.
- Sex (boys and girls) has no significant effect on achievement in Mathematics of Elementary school students.
- Study habits have no significant relationship with achievement in Mathematics of Elementary school students.

5. DELIMITATION OF THE STUDY:

This study was undertaken with the following limitations.

- The study was limited to the class 8th students (boys and girls) of Elementary schools of Banki block in Cuttack district.
- The study was limited to study habits of students learning in Elementary schools.

6. METHOD OF THE STUDY:

Descriptive survey method was used in this study. The variables of the study were:

- (a) Dependent Variable: Achievement in Mathematics. (High, Average, Poor)

- (b) Independent Variables: (i) Sex (boys and girls)
(ii) Study habit (better, average and poor)

7. PARTICIPANTS:

100 Elementary school students equal number of boys and girls were taken randomly in Banki block of Cuttack district.

8. TOOLS:

The following research tools were used to collect data for the study.

- Achievement Test in Mathematics (Developed by the investigators).
- Study Habit Inventory (SHI) by M. Mukhopadhyaya and D.N. Sansanwal, 1994.

9. TECHNIQUES OF DATA COLLECTION:

The researcher used Achievement Test in Mathematics and Study Habit Inventory (SHI) by M. Mukhopadhyaya and D.N. Sansanwal, 1994 to collect data after obtaining prior permission of the head of the institutions.

10. STATISTICAL TECHNIQUES USED:

Factorial design (2x2) way analysis of variance (ANOVA) and Co-efficient of correlation through 't' test was used for analysis the data.

11. RESULT AND DISCUSSION:

In the present study, the effects of sex (boys and girls), study habits (better, average and poor) and interaction effect between sex and study habits on the achievement in Mathematics of the children of class-viii were analyzed and interpreted to get the answers of the research questions and to test the hypotheses.

Effects of study habits on Achievement in Mathematics:

Table-1

Study Habits	N	Mean	S.D	't' value
Better	34	32.67	10.854	4.614
Average	36	40.21	14.378	
Poor	30	38.85	14.142	0.736
Average	36	40.21	14.378	
Better	34	32.67	10.854	3.766
Poor	30	38.85	14.142	

$P < 0.01 / 0.05$

The 't' value of better and average study habits was 4.614 which was significant at 0.01 level, the 't' value of poor and average study habits was 0.736 which was not significant at 0.01 or 0.05 level and the 't' value of better and poor study habits was 3.766 which was significant at 0.01 level in respect of achievement in Mathematics. So the null hypothesis "Study habits have no significant effect on achievement in Mathematics of Elementary school students" was rejected.

Effects of the Sex on Achievement in Mathematics

Table-2

Sex	N	Mean	S.D	't' value
Boys	50	35.12	12.679	0.783
Girls	50	32.44	9.942	

$P < 0.01 / 0.05$

The 't' value is 0.783 which is not significant at 0.01 or 0.05 level. It is inferred that boys and girls do not differ significantly in respect of achievement in Mathematics. So the null hypothesis "Sex (boys and girls) has no significant effect on achievement in Mathematics of Elementary school students" is retained.

Relationship between Study Habits and Achievement in Mathematics

Table-3

R11	df
.149*	98

$P < 0.01$

The r11 value of 0.149 with df98 was significant as $p < 0.01$. It indicates that relationship between study habits and achievement in Mathematics of elementary school students was positive and significant. Hence, the null hypothesis "Study habits have no significant relationship with achievement in Mathematics of Elementary school students" was rejected.

12. FINDINGS OF THE STUDY:

- Boys do not differ significantly from girls on achievement in Mathematics.

- There is significant effect of study habit on achievement in Mathematics. It is inferred that study habits influence achievement in Mathematics.
- Achievement of the students differ in better study habit, average study habit and poor study habits. So study habit is an important factor for achievement in Mathematics.
- Study habits have significant relationship with achievement in Mathematics of children at elementary level.

13. CONCLUSION:

The above discussion of result indicates clearly that Study Habits form an important part in learning especially in the formative years. Better the study habits better the learning achievement as made clear from the present study. The present topic "Effects of Study Habits on Achievement of Elementary School Students in Mathematics" was undertaken to study the level of competency and proficiency of the said subject. Study habit was taken as independent variable and Academic achievement was dependent variable. After carefully studying the variables and analysis done, the investigators came to the conclusion that the students of elementary schools do better due to better study habits. Those who are not performing better in mathematics may be due to poor study habits and other hidden factors. It is therefore suggested to take necessary steps by both parents and teachers to inculcate proper Study Habits in their children in order to get desired outcome of the educational programme especially in Mathematics.

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